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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/891,194	06/26/2001	Jong Hyun Kim	04805.0176-04	9945
22852	7590	05/04/2005	EXAMINER	
FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP 901 NEW YORK AVENUE, NW WASHINGTON, DC 20001-4413			NGUYEN, DUNG T	
			ART UNIT	PAPER NUMBER
			2871	

DATE MAILED: 05/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/891,194

Applicant(s)

KIM ET AL.

Examiner

Dung Nguyen

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9 and 59-66 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9 and 59-66 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Applicants' amendment dated 02/07/2005 has been received and entered. By the amendment, claims 9, 59-66 are remain pending in the application.

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 02/07/2005 has been entered.
2. Applicant's arguments with respect to claim 9 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 9 and 59-66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al., US Patent No. 5,579,141, in view of Applicants' admitted prior art, Schadt et al., Jpn. J. Appl. Phys, Vol. 31, Part 1, No. 7, pp2155-2164, July 1992, and Kang et al., US Patent No. 5,464,669.

Regarding the above claims, Suzuki et al. disclose a method of manufacturing a liquid crystal display (LCD)(figure 1A) comprising the steps of :

- . providing a first alignment layer (polyimide layer 13) on a first substrate (11) and rubbing the first alignment layer (col. 12, ln. 30);
- . providing a second alignment layer (layer 3) on a second substrate (1) and irradiating with UV rays (col. 12, ln. 35);
- . providing a liquid crystal material (4) between the first substrate (11) and the second substrate (1).

Suzuki et al do not explicitly disclose the UV rays including unpolarized light and neither disclose the step of irradiating the second alignment in an oblique direction nor the pretilt angle being controlled by photo-energy.

Schadt et al. figure 2 disclose the step of forming an alignment layer including exposure the alignment layer to unpolarized light in oblique direction. Therefore, it would have been obvious to one skilled in the art at the time of invention was made to form a pretilt angle by exposing an alignment layer to light in oblique direction since it is notoriously well known in the art to form pretilt angles with different directions on such alignment as well as to improve the aligning stability of the alignment film (Schadt et al. page 2157, line 16).

Kang et al. also disclose a pretilt angle can be controlled by photo-energy (col. 3, lines 32-34). Therefore, it would have been obvious to one of ordinary skill in the art to control pretilt angles by photo-energy as shown by Kang et al. in order to pretilt angles with different directions on such alignment, so as to improve a contrast display in an LCD device (see abstract).

Art Unit: 2871

Regarding claims 61, although the modification to Suzuki et al. do not disclose a polysiloxance based material for the second alignment layer, Suzuki does disclose the alignment layer material could be an organic material (e.g., or the like, col. 12, ln. 31-33). Therefore, it would have been obvious to one skilled in the art at the time of the invention was made to use polysiloxance based material for a photo aligned layer, since it has been held to be within the general skill of a worker in the art to select a known material on the basic of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Regarding claim 65, the modification to Suzuki et al. does not disclose the LCD cell including an IPS mode LCD cell. It would have been obvious to one skilled in the art at the time of the invention was made to employ an IPS mode LCD cell in the Suzuki et al device, since it is a common practice in the LCD art to improve a wide viewing angle display.

Conclusion

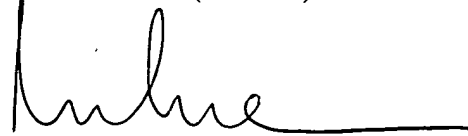
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung Nguyen whose telephone number is 571-272-2297. The examiner can normally be reached on Tuesday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on 571-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2871

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DN
04/29/2005

A handwritten signature in black ink, appearing to read 'Dung Nguyen', with a long horizontal line extending to the right.

Dung Nguyen
Primary Examiner
Art Unit 2871